12-2002

The 2002 Iowa Corn Yield Test Report, District 7

K.E. Ziegler
Iowa State University

W.H. Vinson
Iowa State University

D.E. Carroll
Iowa State University

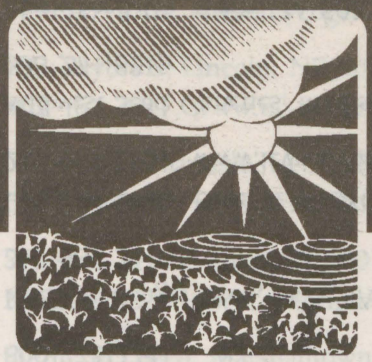
The 2002 Iowa Corn Yield Test Report, District 7

Abstract

Results of the Iowa Crop Performance Test-Com are published to aid Iowa farmers in selecting com hybrids. This is the 83rd consecutive year for the test. These data are first released on the Iowa Crop Improvement Association's homepage at http://www.agron.iastate.edu/icia/ usually around the end of November.

Disciplines

Agriculture



A supplement to the December 14, 2002, issue of *Iowa Farmer Today*

2002 Iowa Crop Performance Test—Corn District 7

Results of the Iowa Crop Performance Test—Corn are published to aid Iowa farmers in selecting corn hybrids. This is the 83rd consecutive year for the test.

These data are first released on the Iowa Crop Improvement Association's homepage at http://www.agron.iastate.edu/icia/ usually around the end of November.

The next released format of these data is in the Iowa Crop Management Database program. A description of this program and an order form can be found at http://extension.agron.iastate.edu/CMD/. A short description of how this program manages these data is provided in the "Other Reports" section of this report.

In 2002, DTN (Data Transmission Network) will be including a summarized version of these data on their system.

The final format is the printed version, which is printed and distributed by *Iowa Farmer Today* in its Dec. 14, 2002 issue. A few days later, the printed reports also are available from county extension offices.

The presentation of data for the hybrids tested does not imply approval or endorsement by the authors or the agencies sponsoring or conducting the test. Entries in Tables 1 and 2 are designated by brand name and variety.

Use of These Data in Advertisements

Iowa State University and the Iowa Crop Improvement Association desire to maintain the credibility of data from the Iowa Crop Performance Test—Corn. Misuse of these data in advertisements can have a negative effect on the perception of the value of these data. For advertising purposes, brand-to-brand comparisons should not be made unless more than one competitor brand is used in the ad and all entries of competitor brands in a reported table are included in the ad. Advertisement statements by an individual company about the performance of its entries can be made as long as they are accurate statements about the data as published with no reference to other companies' hybrids. A statement similar to: "See the official *Iowa Crop Performance Test—Corn* report, PM 660 (1–7) 02, for details," should be included in the ad.

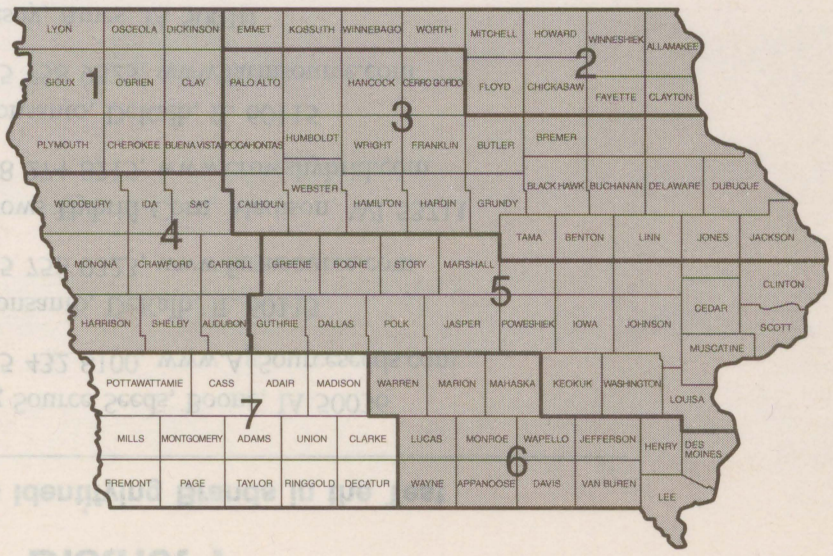
2002 Procedure

Producers of seed corn and Iowa State University were eligible to enter hybrids in the Iowa Crop Performance Test—Corn. Each producer was allowed a maximum of 12 paid entries per district. All commercial entries had to be available in a quantity of at least 10 bushels of seed.

In 2002, data are reported on 125 entries in this district. Fourteen of the entries determined to be check hybrids were entered by the Iowa Crop Improvement Association. In June, survey cards were mailed to a random sample of corn growers in Iowa. Based on the survey results, the 14 hybrids grown on the most acres in the district were classified as check hybrids for the district. The check hybrids ($ and !) in this report were determined by the 2001 survey. The Iowa Crop Improvement Association entered a maximum of three check hybrids of any given brand. These entries were given priority over the remaining 111 entries made by seed producers.

Each entry was replicated four times in four-row plots at a planting rate of 29,000 kernels per acre at each location. All locations were machine planted. The center two rows of each plot were harvested with a corn combine. No gleanings or dropped ears were included in yield data. A moisture determination was made from each plot and yields were corrected to 15.5 percent moisture for shelled corn.

Since 1988, data for protein, oil, and starch percentages have been included in the *Iowa Crop Performance Test—Corn* reports. Protein, oil, and starch were measured on an Infratec 1225 near-infrared transmittance analyzer calibrated against accepted chemical methods as done by Woodson-Tenant Labs, Des Moines, Iowa. Dr. Charles R. Hurburgh, Jr. of the ISU Department of Agricultural and Biosystems Engineering was responsible for analyzing the samples. Samples for nutrient analysis were collected from one field in each district. Data presented are averages of the four replicated plots in that field. To be consistent with the yield data, the protein, oil, and starch data were corrected to 15.5 percent moisture.



Iowa Crop Improvement Association

IOWA STATE UNIVERSITY
University Extension

PM 660 7 02 December 2002

Table 2. Averages of 2001-02 and 2000-02 of Varieties Tested in District 7.
LSD for Yields are 5 Bushels for 00-02 and 7 Bushels for 01-02.

00-02 Protein LSD = 0.1. 00-02 Oil LSD = 0.1. 00-02 Starch LSD = 0.2.
01-02 Protein LSD = 0.2. 01-02 Oil LSD = 0.1. 01-02 Starch LSD = 0.2.

			Yield Bu/A		Moisture Pct		Root Ldg Pct		Stalk Ldg Pct		Drop Ear Pct		Stand Pct		Protein Pct		Oil Pct		Starch Pct			
Brand	Variety	Cross	00-02	01-02	01-02	00-02	00-02	01-02	00-02	01-02	00-02	01-02	00-02	01-02	00-02	01-02	00-02	01-02	00-02	01-02	Variety	Brand
Crows	438Bt	SX		168	15.4			28		2		0		94		8.1		4.0		59.8	438Bt	Crows
$Golden Harvest	H9221Bt	SX	150	142	15.8	14.9	11	16	4	6	0	0	93	93	8.6	8.6	3.4	3.3	60.6	60.1	H9221Bt	$Golden Harvest
$NK Brand	N58-D1	SX		160	16.2			11		1		0		92		8.0		3.3		60.9	N58-D1	$NK Brand
Hoegemeyer	2649	SX		164	16.4			11		3		0		95		8.7		4.0		59.3	2649	Hoegemeyer
Ottilie	5155	SX		163	16.6			5		4		0		93		8.6		3.9		59.5	5155	Ottilie
KSC/Challenger	9212Bt	SX		168	16.7			11		1		0		94		8.0		3.9		59.9	9212Bt	KSC/Challenger
SOI	9102	SX		158	16.7			11		5		0		92		8.8		3.9		59.3	9102	SOI
Lewis	4830RR	SX		159	16.9			20		4		0		93		7.8		3.8		60.3	4830RR	Lewis
Garst	8461	SX		164	17.0			18		2		0		89		7.8		3.8		60.4	8461	Garst
KSC/Challenger	9013+Bt	SX	166	163	17.0	16.2	11	16	2	2	0	0	90	90	8.0	7.9	3.9	3.8	60.7	60.3	9013+Bt	KSC/Challenger
Pfister	2656	SX		166	17.1			23		2		0		92		8.0		3.8		60.1	2656	Pfister
Kruger	9212	SX		174	17.2			28		2		0		94		7.9		3.8		60.2	9212	Kruger
KSC/Challenger	EX214	SX		158	17.2			21		4		0		90		8.0		3.7		60.2	EX214	KSC/Challenger
Middlekoop	M912	SX	164	163	17.3	16.5	17	25	3	3	0	0	93	92	8.7	8.8	4.2	4.1	59.8	59.3	M912	Middlekoop
$Asgrow	RX738RR	SX	157	157	17.5	16.1	10	14	3	3	0	0	91	94	8.4	8.5	3.9	3.9	60.3	59.7	RX738RR	$Asgrow
Lewis	4137	SX	165	164	17.6	16.7	17	26	3	3	0	0	92	94	8.8	8.9	4.2	4.1	59.8	59.2	4137	Lewis
Merschman	M00111	SX		169	17.6			23		2		0		95		8.8		4.1		59.4	M00111	Merschman
$Kruger	9912	SX	165	165	17.7	16.7	17	25	4	3	0	0	93	93	8.8	8.9	4.1	4.1	59.9	59.3	9912	$Kruger
U.S. Seeds	USC1141	SX		156	17.8			15		3		0		93		7.7		3.9		60.4	USC1141	U.S. Seeds
Ag Source	6787	SX	166	165	18.0	16.6	16	23	4	4	0	0	93	95	7.6	7.5	3.9	3.8	61.0	60.6	6787	Ag Source
Merschman	M00113	SX		165	18.0			21		5		0		92		7.6		3.8		60.6	M00113	Merschman
Asgrow	RX730YG	SX		163	18.0			18		2		0		93		7.9		3.7		60.4	RX730YG	Asgrow
FS	6682	SX		165	18.0			23		4		0		94		7.4		3.8		60.8	6682	FS
Middlekoop	M1214	SX	163	161	18.1	16.6	15	22	6	5	0	0	92	93	7.5	7.6	3.9	3.8	61.1	60.5	M1214	Middlekoop
Pfister	2750	SX	166	164	18.1	16.6	14	21	5	4	0	0	93	93	7.3	7.5	3.9	3.8	61.1	60.6	2750	Pfister
M/W Genetics	G8122	SX		164	18.2			20		4		0		93		7.9		3.5		60.6	G8122	M/W Genetics
Golden Harvest	H9164Bt	SX		172	18.2			16		2		0		96		7.6		3.9		60.3	H9164Bt	Golden Harvest
Ag Source	6887	SX	163	166	18.3	16.5	12	18	4	3	0	0	93	95	7.7	7.9	3.5	3.4	61.3	60.7	6887	Ag Source
Four Star	5758	SX	161	163	18.3	16.5	14	21	4	3	0	0	94	94	7.7	7.7	3.6	3.5	61.3	60.8	5758	Four Star
NK Brand	N72-J5	SX		162	18.3			25		4		0		94		7.5		3.8		60.6	N72-J5	NK Brand
$NK Brand	N7070Bt	SX	165	166	18.3	16.8	10	15	2	1	0	0	93	93	8.1	8.2	3.6	3.5	61.1	60.5	N7070Bt	$NK Brand
KSC/Challenger	9114Bt	SX		164	18.4			21		3		0		95		7.8		3.8		60.5	9114Bt	KSC/Challenger
Rainbow	3167	SX		156	18.6			20		4		1		91		8.5		4.0		59.5	3167	Rainbow
Renze	6462	SX		158	19.0			18		4		1		91		8.5		4.1		59.4	6462	Renze
Fontanelle	5591	SX		171	19.0			17		3		0		95		7.6		3.8		60.5	5591	Fontanelle
Desoy	9117	SX	164	161	19.0	18.0	14	21	5	5	1	1	94	94	8.5	8.4	4.2	4.0	60.0	59.6	9117	Desoy
Rainbow	3148YG	SX		173	20.4			7		1		0		95		8.5		3.5		59.9	3148YG	Rainbow
Merschman	M9114	SX		170	20.6			5		0		0		94		8.5		3.6		60.0	M9114	Merschman
Average of All Entries			162.6	163.4	17.7	16.5	14	18	3.7	3.0	0.2	0.2	92.6	93.2	8.1	8.1	3.9	3.8	60.6	60.1	Average of All Entries	
Average of Check Hybrids			159.3	158.1	17.1	16.1	12	16	3.2	2.7	0.2	0.2	92.4	93.0	8.5	8.4	3.8	3.6	60.5	60.1	Average of Check Hybrids	

SX = Single Cross. MSX = Modified Single Cross. 3X = 3-Way Cross. 4X = 4-Way Cross. SXB = Blend of Single Crosses.
$ = Check Hybrid Entered by the Iowa Crop Improvement Association.
! = Short Check Hybrid Grown in Short Blocks.
= Hybrid Entered as a Short Hybrid and Grown in Short Blocks.

Table 1. Average Performance of Varieties Tested in District 7. 29,000 Planting Rate. LSD for 2002 Yield in Bushels is 11, for 2001 is 9, and for 2000 is 8. 2002 Protein Pct LSD = 0.3. 2002 Oil Pct LSD = 0.1. 2002 Starch Pct LSD = 0.4.

Brand	Variety	Cross	Yield Bu/A			Moisture Pct			Root Ldg Pct			Stalk Ldg Pct			Drop Ear Pct			Stand Pct			Protein Pct			Oil Pct			Starch Pct			Variety	Brand
			2000	2001	2002	2002	2001	2000	2002	2001	2000	2002	2001	2000	2002	2001	2000	2002	2001	2000	2002	2001	2000	2002	2001	2000	2002	2001	2000		
Crows	438Bt	SX		163	173	14.5	16.4		30	26		1	3		0	0		93	96		7.8	8.4		3.9	4.0		60.1	59.6		438Bt	Crows
DEKALB	DKC58-78(YG)	SX			173	14.7			19			0			0			97			8.5			3.9			59.6			DKC58-78(YG)	DEKALB
$NK Brand	N58-D1	SX		159	161	14.8	17.6		14	8		1	1		1	0		91	92		7.8	8.1		3.2	3.4		61.1	60.7		N58-D1	$NK Brand
$Golden Harvest	H2552	SX			140	14.8			26			5			0			94			8.2			3.6			60.3			H2552	$Golden Harvest
DEKALB	DKC60-08(YG)	SX			166	14.9			17			2			0			94			7.9			3.8			60.3			DKC60-08(YG)	DEKALB
KSC/Challenger	9212Bt	SX		161	175	15.0	18.4		18	5		1	1		0	0		92	96		7.4	8.6		3.9	4.0		60.6	59.2		9212Bt	KSC/Challenger
Hoegemeyer	2649	SX		168	159	15.1	17.7		15	7		1	4		0	0		93	96		8.7	8.7		4.0	4.1		59.3	59.2		2649	Hoegemeyer
Pfister	2646	SX			164	15.3			21			1			0			95			8.3			3.8			60.0			2646	Pfister
$Golden Harvest	H9221Bt	SX	166	139	146	15.4	16.3	13.0	31	2	0	0	11	2	1	0	0	93	92	93	8.5	8.7	8.5	3.4	3.2	3.7	60.2	60.1	61.7	H9221Bt	$Golden Harvest
Renze	6373	SX			159	15.4			28			2			1			90			7.2			3.1			61.7			6373	Renze
Kruger	9113	SX			162	15.4			30			3			0			92			7.5			3.2			61.4			9113	Kruger
Ottilie	5155	SX		163	153	15.4	17.8		6	4		1	6		0	0		93	93		8.4	8.8		3.8	3.9		59.7	59.3		5155	Ottilie
Lewis	4830RR	SX		161	157	15.4	18.3		23	16		2	7		0	0		92	94		7.7	7.8		3.8	3.8		60.4	60.2		4830RR	Lewis
Golden Harvest	H9087	SX			159	15.4			36			2			0			92			7.7			3.5			61.0			H9087	Golden Harvest
SOI	9102	SX		164	153	15.5	18.0		18	5		4	5		0	0		91	94		8.7	8.9		3.9	3.9		59.4	59.3		9102	SOI
KSC/Challenger	9013+Bt	SX	174	160	166	15.5	18.5	14.6	23	9	0	1	2	2	0	0	0	92	88	89	7.6	8.2	8.0	3.9	3.8	4.0	60.5	60.0	61.6	9013+Bt	KSC/Challenger
DEKALB	DKC62-15	SX			157	15.6			30			3			0			93			8.0			3.7			60.3			DKC62-15	DEKALB
KSC/Challenger	9214-1	SX			165	15.6			19			4			0			93			8.8			3.6			60.5			9214-1	KSC/Challenger
KSC/Challenger	9312B	SX			159	15.6			22			2			0			95			7.8			3.9			60.4			9312B	KSC/Challenger
Golden Harvest	H8906	SX			172	15.6			28			1			0			93			8.2			3.8			60.0			H8906	Golden Harvest
Kruger	9212	SX		174	174	15.6	18.7		31	25		1	2		0	0		93	95		7.9	7.9		3.9	3.7		60.1	60.4		9212	Kruger
Garst	8461	SX		163	166	15.7	18.2		24	12		2	2		0	0		88	90		7.6	8.0		3.8	3.7		60.6	60.2		8461	Garst
Renze	6363	SX			170	15.7			29			2			0			95			7.8			3.8			60.4			6363	Renze
Wilson	1563	SX			165	15.7			30			0			0			96			7.7			3.8			60.3			1563	Wilson
M/W Genetics	G7706	SX			169	15.7			23			2			0			93			7.8			3.8			60.4			G7706	M/W Genetics
Asgrow	RX708YG	SX			171	15.7			30			3			0			93			8.3			3.7			60.1			RX708YG	Asgrow
Pfister	2656	SX		169	163	15.8	18.4		26	21		1	3		0	0		91	93		8.0	8.0		3.8	3.8		60.2	60.0		2656	Pfister
FS	6473	SX			170	15.8			22			2			0			95			7.7			3.9			60.4			6473	FS
SOI	9132	SX			173	15.8			16			1			0			94			7.5			3.9			60.5			9132	SOI
KSC/Challenger	EX9212	SX			160	15.8			22			2			0			96			8.9			3.9			59.5			EX9212	KSC/Challenger
$M/W Genetics	G7950	SX			167	15.9			30			2			0			94			8.8			4.2			59.3			G7950	$M/W Genetics
Lewis	4137	SX	166	168	160	15.9	19.2	14.9	31	20	0	1	4	4	0	0	0	95	94	88	8.8	8.9	8.7	4.1	4.1	4.2	59.2	59.2	61.1	4137	Lewis
Kruger	9614BBt	SX			154	15.9			19			3			0			85			8.0			3.9			60.1			9614BBt	Kruger
Middlekoop	M912	SX	166	161	164	15.9	18.6	14.9	34	16	0	1	5	2	0	0	0	93	91	94	8.7	8.9	8.6	4.2	4.1	4.4	59.4	59.2	61.0	M912	Middlekoop
$Asgrow	RX738RR	SX	156	159	156	15.9	19.2	13.2	22	6	1	2	3	3	0	0	0	95	94	84	8.5	8.5	8.4	4.0	3.8	3.9	59.6	59.8	61.5	RX738RR	$Asgrow
Golden Harvest	H9235Bt/RR	SX			167	15.9			21			0			0			93			8.5			3.9			59.8			H9235Bt/RR	Golden Harvest
Lewis	5113Bt	SX			157	15.9			32			0			0			95			8.7			3.9			59.6			5113Bt	Lewis
NetSeeds	Net1155	SX			160	15.9			29			4			0			94			7.5			3.9			60.6			Net1155	NetSeeds
NetSeeds	Net1106	SX			169	16.0			33			2			0			95			8.8			4.2			59.2			Net1106	NetSeeds
FS	6863CL	SX			160	16.0			27			2			0			93			8.8			4.2			59.2			6863CL	FS
DEKALB	DKC61-25(YG)	SX			175	16.0			33			2			0			93			9.1			4.2			58.9			DKC61-25(YG)	DEKALB
$Kruger	9912	SX	166	162	168	16.0	19.5	14.6	27	23	0	2	5	6	1	0	0	94	92	92	8.8	8.9	8.6	4.1	4.1	4.2	59.3	59.3	61.2	9912	$Kruger
$NC+	5169	SX			159	16.0			30			3			0			93			8.8			4.2			59.3			5169	$NC+
KSC/Challenger	9313	SX			156	16.0			21			1			0			92			8.1			3.8			60.0			9313	KSC/Challenger
$Pioneer	33G26	SX			163	16.0			24			3			0			94			8.1			3.7			60.6			33G26	$Pioneer
Pfister	2730	SX			150	16.0			26			3			0			87			8.1			3.6			60.4			2730	Pfister
U.S. Seeds	USC1141	SX		156	157	16.0	19.5		24	7		3	3		0	0		95	90		7.6	7.9		3.8	3.9		60.6	60.2		USC1141	U.S. Seeds
Kruger	EX312HB	SX			167	16.1			19			5			0			90			7.1			3.8			61.1			EX312HB	Kruger
Ag Source	6233YGCB	SX			166	16.1			30			0			0			91			8.8			4.0			59.4			6233YGCB	Ag Source
Ag Source	6787	SX	167	167	163	16.2	19.8	14.0	31	14	1	2	5	4	0	0	0	95	94	89	7.4	7.7	7.6	3.9	3.8	4.1	60.6	60.5	62.0	6787	Ag Source
Merschman	M00111	SX		168	170	16.2	19.0		30	16		1	4		0	0		96	93		8.8	8.8		4.1	4.0		59.4	59.3		M00111	Merschman
Middlekoop	M1214	SX	167	157	164	16.2	19.9	13.7	25	19	1	3	8	6	0	0	0	92	94	92	7.3	7.9	7.2	3.9	3.7	4.1	60.7	60.3	62.4	M1214	Middlekoop
Ag Source	6183YGCB	SX			184	16.2			28			1			0			91			7.6			3.9			60.5			6183YGCB	Ag Source
Asgrow	RX730YG	SX		170	157	16.2	19.8		24	12		2	1		0	0		92	95		7.9	8.0		3.8	3.6		60.4	60.3		RX730YG	Asgrow
KSC/Challenger	EX214	SX		166	151	16.3	18.2		21	22		2	5		1	0		88	93		8.2	7.9		3.7	3.6		60.0	60.5		EX214	KSC/Challenger
$Wilson	1664	SX			158	16.3			24			1			0			95			7.8			3.8			60.3			1664	$Wilson
FS	6682	SX		165	165	16.3	19.8		28	17		4	4		0	0		93	95		7.3	7.6		3.9	3.6		60.7	60.9		6682	FS
Kruger	9315BBt	SX			176	16.3			12			0			0			91			8.4			3.5			60.0			9315BBt	Kruger
Kaystar	KX-898	SX			157	16.3			32			3			1			92			7.4			3.7			60.8			KX-898	Kaystar
Kruger	EX217	SX			148	16.3			28			2			1			94			8.1			3.6			60.2			EX217	Kruger
NK Brand	N68-K7	SX			166	16.3			26			1			0			96			7.8			3.8			60.7			N68-K7	NK Brand
Merschman	M00113	SX		164	165	16.4	19.6		30	13		4	6		0	0		92	91		7.5	7.6		3.7	3.8		60.8	60.4		M00113	Merschman
Rainbow	3167	SX		164	147	16.4	20.8		30	10		3	6		1	0		93	90		8.5	8.6		4.1	3.9		59.4	59.6		3167	Rainbow
NK Brand	N72-J5	SX		164	159	16.4	20.2		29	22		4	4		0	0		94	93		7.3	7.7		3.9	3.8		60.7	60.5		N72-J5	NK Brand
Fontanelle	5282	SX			156	16.4			27			3			0			93			7.7			3.9			60.3			5282	Fontanelle
Renze	6462	SX		168	148	16.4	21.5		27	9		4	4		2	0		93	90		8.5	8.5		4.2	4.0		59.3	59.6		6462	Renze
Four Star	5758	SX	156	159	167	16.5	20.1	13.0	27	16	0	2	4	6	1	0	0	92	95	93	7.6	7.8	7.7	3.4	3.5	3.7	61.0	60.7	62.3	5758	Four Star
Wilson	1765	SX			169	16.5			28			1			0			94			8.0			3.5			60.6			1765	Wilson
$Mycogen	7250	SX			159	16.5			22			2			0			93			8.4			3.8			59.8			7250	$Mycogen
$Pioneer	34B24	SX			182	16.5			23			1			0			96			8.1			3.5			60.5			34B24	$Pioneer
DEKALB	DKC60-19RRYG	SX			180	16.5			19			0			0			93			7.4			3.6			60.8			DKC60-19RRYG	DEKALB
Pfister	2750	SX	170	163	166	16.5	19.7	13.7	27	14	1	2	5	7	0	0	0	91	94	94	7.5	7.6	7.0	3.9	3.8	4.0	60.5	60.6	62.2	2750	Pfister
Garst	8348	SX			155	16.5			17			5			1			94			7.9			3.6			60.2			8348	Garst
Ag Source	7247	SX			159	16.6			27			1			0			93			8.9			4.1			59.4			7247	Ag Source
Lewis	5450	SX			166	16.6			24			4			0			95			7.9			3.6			60.5			5450	Lewis
Crows	5328	SX			158	16.6			27			3			1			89			8.5			4.1			59.4			5328	Crows
M/W Genetics	G8122	SX		165	163	16.6	19.8		33	8		3	5		0	0		93	92		7.9	8.0		3.5	3.5		60.6	60.6		G8122	M/W Genetics
Ag Source	6887	SX	158	163	168	16.6	19.9	13.1	27	8	1	2	4	5	0	0	0	95	96	89	7.8	7.9	7.5	3.5	3.4	3.6	60.7	60.8	62.4	6887	Ag Source
$NK Brand	N7070Bt	SX	164	162	170	16.6	20.0	13.7	21	9	0	0	1	3	0	0	0	91	96	93	8.0	8.4	7.9	3.6	3.4	3.9	60.6	60.4	62.2	N7070Bt	$NK Brand
KSC/Challenger	9115	SX			183	16.7			28			2			0			93			7.9			3.6			60.5			9115	KSC/Challenger
Kaup Seed	KS97-1132Bt	SX			164	16.7			30			1			0			92			7.4			3.5			61.2			KS97-1132Bt	Kaup Seed
Mark	MRK02113	SX			173	16.7			22			3			0			91			7.6			3.7			60.8			MRK02113	Mark
Hawkeye Hybrid	SX65	SX			166	16.7			23			1			0			94			7.6			4.0			60.4			SX65	Hawkeye Hybrid
KSC/Challenger	EX317	SX			165	16.7			22			2			0			92			8.2			3.7			59.9			EX317	KSC/Challenger
Desoy	9117	SX	170	164	158	16.7	21.4	15.8	27	14	0	4	6	6	2	0	0	94	95	93	8.3	8.5	8.6	4.0	3.9	4.6	59.7	59.5	60.8	9117	Desoy
Middlekoop	M3314Bt	SX			170	16.7			24			2			1			93			7.6			3.8			60.6			M3314Bt	Middlekoop
KSC/Challenger	9114Bt	SX		155	172	16.7	20.1		30	13		1	5		0	0		96	95		7.4	8.1		3.9	3.7		60.6	60.4		9114Bt	KSC/Challenger
Stine	9715Bt	SX			164	16.7			28			1			0			90			7.8			3.7			60.5			9715Bt	Stine
Kruger	9315Bt	SX			173	16.8			29			1			0			96			8.1			3.6			60.4			9315Bt	Kruger
Premium	P262	SX			154	16.8			29			4			1			96			8.4			4.1			59.5			P262	Premium
Merschman	M20112	SX			161	16.8			26			1			0			90			7.6			3.5			61.1			M20112	Merschman
KSC/Challenger	9315ABt	SX			164	16.8			28			0			0			94			7.3			3.6			61.2			9315ABt	KSC/Challenger
Golden Harvest	H9164Bt	SX		174	171	16.8	19.6		21	11		1	3		0	0		97	95		7.3	7.9		4.0	3.8		60.5	60.2		H9164Bt	Golden Harvest
Kruger	9216	SX			156	16.9			29			3			0			92			7.6			3.8			60.6			9216	Kruger
Wilson	1785	SX			179	16.9			26			1			0			96			8.2			3.5			60.4			1785	Wilson
Hoegemeyer	HBt657	SX			171	16.9			27			1			0			94			7.7			4.0			60.2			HBI657	Hoegemeyer
Stine	9803	SX			162	17.0			24			2			0			90			7.2			3.4			61.5			9803	Stine
Renze	8383Bt	SX			170	17.0			26			1			0			91			8.1			3.4			60.6			8383Bt	Renze
Ottilie	5115	SX			166	17.0			24			3			0			92			7.2			3.5			61.5			5115	Ottilie
Four Star	5738Bt	SX			177	17.0			21			1			0			93			7.9			3.6			60.7			5738Bt	Four Star
Renze	8381Bt	SX			169	17.0			19			0			0			91			7.8			3.8			60.3			8381Bt	Renze
Ottilie	5267Bt	SX			173	17.1			23			0			0			95			7.8			3.8			60.3			5267Bt	Ottilie
M/W Genetics	G8070	SX			171	17.1			28			1			0			93			8.0			3.5			60.6			G8070	M/W Genetics
Crows	5202	SX			174	17.1			27			1			0			93			8.0			3.6			60.5			5202	Crows
$Garst	8464IT	SX			156	17.2			31			2			0			95			8.5			3.6			59.8			8464IT	$Garst
U.S. Seeds	USC1143Bt	SX			169	17.2			30			1			0			93			7.2			3.5			61.4			USC1143Bt	U.S. Seeds
U.S. Seeds	USC1153	SX			164	17.2			11			3			0			93			8.1			3.8			60.0			USC1153	U.S. Seeds
Fontanelle	5591	SX		167	175	17.2	20.7		25	10		2	4		0	0		97	94		7.4	7.8		3.9	3.8		60.6	60.4		5591	Fontanelle
Kruger	9216A	SX			169	17.3			3			2			0			92			7.9			3.8			60.2			9216A	Kruger
Pfister	3030Bt	SX			163	17.3			30			0			1			93			8.3			3.8			60.0			3030Bt	Pfister
Renze	8492Bt	SX			156	17.4			25			0			1			95			7.8			3.8			60.3			8492Bt	Renze
Kruger	EX316Bt	SX			166	17.4			27			1			0			97			8.4			3.7			59.7			EX316Bt	Kruger
Mark	MRKEX114A	SX			152	17.5			27			1			0			90			8.3			3.8			59.8			MRKEX114A	Mark
High Cycle	HC7966Bt	SX			160	17.5			30			0			1			94			7.8			3.7			60.4			HC7966Bt	High Cycle
Garst	8288	SX			162	17.7			29			3			0			93			8.0			3.0			61.0			8288	Garst
Garst	8484Bt/IT	SX			160	17.8			31			0			0			92			8.5			3.7			59.7			8484Bt/IT	Garst
Merschman	M9114	SX		167	174	18.1	23.2		6	4		0	0		0	0		96	92		8.3	8.6		3.6	3.5		60.0	60.0		M9114	Merschman
$Pioneer	33P67	SX			189	18.1			24			1			0			93			8.4			3.8			60.0			33P67	$Pioneer
U.S. Seeds	USC1132ND	SX			144	18.2			21			2			0			91			9.7			4.1			58.2			USC1132ND	U.S. Seeds
Zimmerman	WX7812	SX			133	18.3			48			1			0			92			9.7			3.5			59.1			WX7812	Zimmerman
Garst	8328Bt/IT	SX			169	18.4			29			1			0			94			8.0			3.9			59.9			8328Bt/IT	Garst
Rainbow	3148YG	SX		167	179	18.6	22.2		8	6		1	1		0	0		96	93		8.6	8.5		3.6	3.5		59.9	60.0		3148YG	Rainbow
Desoy	9915ABt	SX			163	18.8			6			2			0			95			8.3			3.6			60.0			9915ABt	Desoy
KSC/Challenger	9017Bt	SX			181	19.3			34			1			0			97			7.5			3.9			60.4			9017Bt	KSC/Challenger
Zimmerman	1851W	SX			144	19.7			48			1			0			92			9.7			4.1			58.6			1851W	Zimmerman
Average of All Entries			165.1	163.3	164.1	16.4	19.4	14.0	25.2	12.6	0.4	1.8	4.1	4.3	0.3	0.1	0.1	93.1	93.3	91.1	8.0	8.2	8.0	3.8	3.8	4.0	60.2	60.0	61.7	Average of All Entries	
Average of Check Hybrids			162.8	156.2	162.4	16.1	18.5	13.6	24.9	9.5	0.4	1.9	4.2	3.5	0.3	0.1	0.1	93.7	93.2	90.7	8.3	8.5	8.4	3.8	3.6	3.9	60.0	60.1	61.6	Average of Check Hybrids	

SX = Single Cross. MSX = Modified Single Cross. 3X = 3-Way Cross. 4X = 4-Way Cross. SXB = Blend of Single Crosses.
$ = Check Hybrid Entered by the Iowa Crop Improvement Association.
! = Short Check Hybrid Grown in Short Blocks.
= Hybrid Entered as a Short Hybrid and Grown in Short Blocks.

With the quick development of new hybrids today, it is becoming more difficult for growers to view several years of data on each hybrid to help them decide which hybrids to select for planting the following year. The next best thing is to look at hybrids' performances across several locations in one year. So, data from additional location groupings along with the standard district groupings are provided on the Iowa Crop Improvement Association's Web page at http://www.agron.iastate.edu/icia/. These additional tables, summarizing data across districts, make it possible to look at hybrids' performances averaged across more locations than in the past to help predict which hybrids may have the best relative performance potential under next year's growing conditions. These 16 new tables double or triple the number of locations reflected in each hybrid's performance data.

District 7

Designations Identifying Brands in the Test

Ag Source .... Ag Source Seeds, Boone, IA 50036
515 432 8100, www.AgSourceseeds.com

*Asgrow .... Monsanto, DeKalb, IL 60115
815 758 9323, www.farmsource.com

Crows .... Crows Hybrid Corn, Madison, WI 53711
608 274 8215, www.crowshybrid.com

DEKALB .... Monsanto, DeKalb, IL 60115
815 758 9323, www.farmsource.com

Desoy .... Desoy, Ames, IA 50010
800 368 9528

Fontanelle .... Fontanelle Hybrids, Fontanelle, NE 68044-2505
402 721 1410, www.fontanelle.com

Four Star .... Four Star Seed, Parkersburg, IA 50665
712 644 1400, www.4Starseed.com

FS .... Growmark, Bloomington, IL 61702
309 557 6398, www.growmark.com

*Garst .... Garst Seed, Marion, IA 52302
319 373 7458

*Golden Harvest .... J.C. Robinson Seed, Waterloo, NE 68069
402 289 6553, www.goldenharvestseeds.com

*Golden Harvest .... J.C. Robinson Seed, Cordova, IL 61242
800 421 1169, www.goldenharvestseeds.com

Hawkeye Hybrid .... Hawkeye Hybrids, Pella, IA 50219
641 628 3827

High Cycle .... Fontanelle Hybrids, Fontanelle, NE 68044-2505
402 721 1410, www.fontanelle.com

Hoegemeyer .... Hoegemeyer Hybrids, Hooper, NE 68031
402 654 3399, www.therightseed.com

Kaup Seed .... Kaup Seed, West Point, NE 68788
402 372 5588, www.kaupseed.com

Kaystar .... Kaystar Seed, Huron, SD 57350
605 352 8791, www.kaystarseed.com

*Kruger .... Kruger Seed Co., Dike, IA 50624
800 772 2721

KSC/Challenger .... KSC/Challenger Seed, Dike, IA 50624
319 989 2414

Lewis .... Lewis Hybrids, Ursa, IL 62376
217 964 2131, www.lewishybrids.com

*M/W Genetics .... Midwest Seed Genetics, Madison, WI 53711
608 274 8215

Mark .... Mark Seed Co., Perry, IA 50220
515 465 2122, www.markseed.com

Merschman .... Merschman Seeds, West Point, IA 52656
319 837 6111 Ext. 2311, www.merschmanseeds.com

Middlekoop .... Middlekoop Seed Corn, Packwood, IA 52580
319 695 3266

*Mycogen .... Mycogen Seeds, Indianapolis, IN 46268-1054
317 337 7569, www.mycogen.com

*NC+ .... NC+ Hybrids, Lincoln, NE 68504-0408
402 467 2517, www.nc-plus.com

NetSeeds .... NetSeeds, Urbandale, IA 50322
515 331 0939, www.netseeds.com

*NK Brand .... Syngenta Seeds, Ames, IA 50010
515 239 3505, www.syngenta.com

Ottilie .... Ottilie RO Seed, Marshalltown, IA 50158
641 753 5561

Pfister .... Pfister Hybrid Corn, El Paso, IL 61738
309 527 6000, www.pfisterhybrid.com

*Pioneer .... Pioneer Hi-Bred Intl. Inc., Johnston, IA 50131-0454
515 253 5892, www.pioneer.com

Premium .... Premium Seed, Berwick, IL 61417
309 462 2396, www.seedquest.net/premiumseed

Rainbow .... Rainbow Seeds, Oskaloosa, IA 52577
800 373 9401, www.rainbowseeds.com

Renze .... Renze Hybrids, Carroll, IA 51401
712 669 3301, www.renzehybrids.com

SOI .... Sand Seed Service, Inc., Marcus, IA 51035
712 376 4135, www.sandsofiowa.com

Stine .... Stine Seed, Adel, IA 50003
800 362 2510

U.S. Seeds .... United Suppliers, Eldora, IA 50627-0538
877 714 4503

*Wilson .... Wilson Seeds, Madison, WI 53711
608 274 8215

Zimmerman .... Wilson Genetics, LLC, Harlan, IA 51537
712 755 7399

*Companies with one or more check hybrids entered by the Iowa Crop Improvement Association.

How Information Is Presented

The agronomic data presented are averages of three locations in 2000, 2001, and 2002. Yield in bushels per acre and percentages of moisture, root lodging, stalk lodging, dropped ears, stand, protein, oil, and starch are shown for all entries in 2002 and for those tested in 2000 and 2001 that were in the 2002 test.

Interpretation of Results

Yield differences due to variation in soil, fertility, moisture availability, insect infestation, and diseases, plus any variation due to planting and harvesting techniques, are identified through statistical analysis. The LSD values for yield shown in Tables 1 and 2 represent, in bushels per acre, the amount of yield variation that could be due to variations in the factors just mentioned. In comparing varieties, yield differences greater than the LSD value can be attributed to genetic differences in the yield potential of these varieties; yield differences less than the LSD value are not statistically different and could have been due to other factors.

Grain moistures shown in Tables 1 and 2 are indications of maturity and natural drying rate. Maturity of varieties entered generally ranged from short to full season. Yield comparisons should be made among varieties of similar maturity.

It is important to select varieties having stable performance over a range of environmental conditions. High yields for two or more consecutive years, Table 2, indicate stable performance. Also, in 2002, to increase the range of environmental conditions reported on in one year, 16 additional tables are provided electronically on the Iowa Crop Improvement Web page that merge data across districts. These tables double, and in some cases even triple, the number of locations reported on for hybrids entered in several districts. Supplemental yield and agronomic information about specific varieties may be obtained from seed corn dealers, crop consultants, and from neighbors who have grown these varieties.

The protein, oil, and starch percentage data (Tables 1 and 2) are quality traits important to different end-users of corn. For feed, protein is of primary interest; for wet-mill processing (ethanol and sweeteners), oil and starch content are important. Several firms have begun testing these characteristics on a routine basis. There are now more than 50 Iowa grain elevators with this testing capability.

Whole-grain near-infrared equipment measures composition of unground corn kernels in 1 to 1.5 minutes per sample. The equipment measures moisture simultaneously with composition. Using these instruments, country elevators can test and segregate grain as it is received. Obviously, all compositional factors cannot be high in the same hybrid. The grain market is expanding the production and marketing of certain hybrids for specific uses. This is an important change from the generic commodity approach widely used now.

The economic impact of compositional factors can be significant. Corn protein trades off with other protein sources in many feed rations. At $200 per ton for 44 percent protein soybean meal, the value of a 1 percent increase (e.g., from 8 percent to 9 percent) in corn protein is about 12 cents per bushel of corn. Likewise, an additional percent of oil yields about 10 to 14 cents per bushel in increased oil output in a wet processing plant or when substituted for white grease in feed rations. The additional ethanol or sweetener from an extra percent of starch provides 8 to 10 cents per bushel more revenue. Producers feeding livestock are in the best position to capture immediate benefits from these composition data. Country elevators with feed mills also have the ability to capitalize on increased protein in corn. The Iowa Corn Growers Association has prepared a publication to aid growers in using the nutrient data in the *Iowa Crop Performance Test—Corn* reports: *Nutrient Content and Feeding Value of Iowa Corn*, Iowa Corn Growers Association, Des Moines, Iowa 50265.

Hybrids with similar yields and agronomic characteristics may not be identical in corn composition. Therefore, feed costs can be reduced by selecting higher protein hybrids from a group with similar yield potential. Weather and soil conditions affect composition, but the relative ranking of hybrids does not change greatly. A higher protein hybrid will be higher than average regardless of environmental conditions that raise or lower the averages. The protein percentages reported are measures of crude protein and may not give an accurate indication of feed value if feed rations are balanced on individual amino acids rather than crude protein content.

2002 Field Data

The District 7 test was planted on farms operated by Robert Hays near Malvern in Mills County, Marvin Fuller near Corning in Adams County, and Marvin Eivins west of Winterset near the Madison-Adair County line. Field data are presented in Table A.

Table A. Field Data

	Hays Farm Monona silt loam				Fuller Farm* Macksburg silty clay loam			Eivins Farm Sharksburg silty clay loam		
Fertilizer applied, lb.	N	P_2O_5	K_2O	S	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Plowdown	—	—	—	—	—	—	—	18	46	50
Preplant	151	—	—	36	150	40	60	140	—	—
Total	151	—	—	36	150	40	60	158	46	50
2001 crop	Soybeans				Soybeans			Soybeans		
Row width	30 inches				30 inches			30 inches		
Planting date	April 20				May 7			May 7		
Harvest date	Sept. 30 & Oct. 7				Oct. 21 & 22			Oct. 22		
Average yield	151 bu/a				161 bu/a			180 bu/a		

*Field sampled for protein, oil, and starch percentage data.

Other Reports

Separate reports are available for each district shown in Figure 1. A limited supply of these publications is available at your county extension office or from Extension Distribution Center, 119 Printing and Publications Building, Iowa State University, Ames, Iowa 50011. Also, these data are available along with a hybrid selection program as a part of the Iowa Crop Management Database program. Along with all of the information as it appears in these written reports, the section of the Iowa Crop Management Database program that uses these data allows farmers to insert their own drying and shrink costs, expected price of corn, and final moisture percentage after drying. Using these specific criteria, the program calculates an adjusted economic value for each hybrid in the test. Farmers can then determine which hybrids might best fit their own production practices and provide the most profit. The computer program also can sort the hybrids by yield, moisture, adjusted value, root lodging, stalk lodging, dropped ears, protein, oil, starch, or brand and then print the data as sorted. It will also allow the user to tag selected hybrids and then list those selected hybrids as a new table for ease of viewing. A Pentium 1 computer or higher running Windows 95 or newer with a CD ROM drive and 30 megabytes of hard disk space are required to run the program. The cost of the program is a onetime purchase of $100. Future years' data can be downloaded from the Web at no charge. If the user cannot access the Web to download the new data, the price will be $25 for all seven districts' data. Order forms and a description of the program are available from Agribusiness Education Programs, telephone 515-294-6429, and on the Web at http://extension.agron.iastate.edu/CMD/.

The *2002 Iowa Crop Performance Test—Corn:*

PM 660 1 02 District 1
PM 660 2 02 District 2
PM 660 3 02 District 3
PM 660 4 02 District 4
PM 660 5 02 District 5
PM 660 6 02 District 6
PM 660 7 02 District 7

File: Agronomy 2-2

Prepared by K. E. Ziegler, W. H. Vinson, and D. E. Carroll, instructor in agronomy and technicians.

Cooperating Organizations
Iowa Crop Improvement Association
Agriculture & Home Economics Experiment Station
Cooperative Extension Service
Iowa Corn Promotion Board
U.S. Department of Agriculture

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Stanley R. Johnson, director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.